

Arctic long-term observatory FRAM

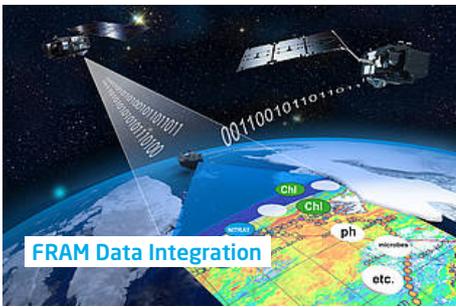
5,000 metres seawater plus ice separate the seafloor from boisterous life in the upper water layers of the Arctic Ocean. Additionally there is a strong change between 24 hours of light during summer and permanent darkness in polar night. Nature with coldness, wind, and ice determines when and how marine scientists may reach certain regions. FRAM is constructed to shift the Frontiers of Arctic Marine Monitoring: By means of new developments and proven technologies from underwater vehicles to microsensors the observatory is going to enable the recording of physical, chemical and biological data in high temporal and spatial resolution.

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Research Areas Fram Strait and Central Arctic

Starting point for FRAM are two AWI long term observatories: the moorings in West Spitsbergen Current and „HAUSGARTEN“, both existing for more than 15 years. So far stationary devices are complemented with diverse mobile components such as deep-sea robots, ice buoys and autonomously operating underwater robots. They are designed to enable a look beyond the moorings and the Hausgarten into the Norwegian Sea and the Arctic Ocean.

The Fram Strait connects the Arctic Ocean and the North Atlantic. Unlike the shallow water conjunction to the Pacific, this connection is up to 5569 metres deep and thus the main region for exchange of water between the Arctic and the global oceans. Due to its importance for the global ocean circulation the Fram Strait has long since been a focus area of AWI scientists.



A treasure of data for everyone

FRAM technology provides large amounts of data that will be made available via the AWI data portal



These technologies provide valuable data

The data is recorded in high temporal and spatial resolution



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